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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/711,950

10/15/2004

Thomas Robieu

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30008

7590

10/13/2006

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EXAMINER

CHUKWURAH, NATHANIEL C

ART UNIT

PAPER NUMBER

3721

DATE MAILED: 10/13/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/711,950

Applicant(s)

ROBIEU ET AL.

Examiner

Nathaniel C. Chukwurah

Art Unit

3721

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 22 August 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-26 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-5, 7-9, 14, 17-20, 23, 24 and 26 is/are rejected.
- 7) ☒ Claim(s) 6, 10-13, 15, 16, 21, 22 and 25 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 15 October 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date <u>3/1/2006</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. This office action is in response to the amendment filed on 8/22/2006.

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-5, 7-9, 14 and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over UK (1,095,065) in view of Nickel et al. (US 4,635,777).

With regard to claim 1, the reference of UK discloses a portable device (grinder) having an overload protection device (slip coupling) comprises a drive motor (1); a drive shaft (2); an output shaft (5), wherein the output shaft (5) is arranged substantially perpendicularly to the drive shaft (1); a drive pinion (3) connected to the drive shaft (2); a drum (12) supported on the output shaft (5) and driven in rotation by the drive pinion (3); a coupling (14) arranged between the drum (12) and the output shaft (5) and engaging the drum (12); wherein the coupling (14) is connected to the output shaft (5); wherein, when the output shaft is blocked, the coupling effects an automatic decoupling between the drum (12) and the output shaft (5) in order to prevent overloading of the drive motor (1).

The UK reference discloses the claimed subject matter but lacks specific teaching of the coupling being force against the drum by the centrifugal force generated by the rotation of the output shaft. The reference of Nickel et al. teaches the coupling (4,5) coupling forced against the

Art Unit: 3721

drum by the centrifugal force generated by the rotation of the output shaft so as to engage the drum. In view of the teaching Nickel et al., it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the portable device of UK by providing the coupling which are forced against the drum by the centrifugal force generated by the rotation of the output shaft in order to engage and rotate the drum. See column 2, lines 59-68.

With regard to claim 2, the portable device of UK'065 includes the coupling (14) and the drum (12) engaging one another by frictional contact for transmitting a drive torque onto the output shaft (5).

With regard to claim 3, the portable device of UK'065 includes the coupling (14) and the drum (14) each have contact surfaces coated with a friction material (friction face).

With regard to claim 4, the portable device of UK'065 further comprising a pressing device (17) (dished spring) that forces the coupling (14) against the drum (12).

With regard to claim 5, the portable device of UK'065 includes the pressing device comprising of a coil spring (17).

With regard to claim 7, the portable device UK includes the coupling (14) being forced against the drum (12) by centrifugal force generated by rotation of the output shaft (5).

With regard to claim 8, the portable device of UK, further comprising a pressing device (17), wherein the coupling (14) is forced against the drum (12) by the pressing device and by centrifugal force generated by rotation of the output shaft (5).

With regard to claim 9, the portable device of UK includes a coil spring (17).

With regard to claim 14, the portable device of UK includes the coupling (14) comprises driving means (friction plate) that have a rotary surface interacting by friction with a rotary

Art Unit: 3721

surface of the drum (12), wherein the driving means (friction plate) comprise a spring device (17) forcing the rotary surface of the driving means (friction plate) against the rotary surface of the drum (12).

With regard to claim 17, the portable device of UK includes a drive action of a tool (grinder) connected to the output shaft (5) being interrupted when the tool (grinder) encounters a resistance and is blocked (Page 1, col. 1, lines 16-17).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 18-20, 23 and 26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bidanset (US 3,982,616).

With regard to claims 18 and 26, the reference of Bidanset discloses an overload protection device (safety coupling) including a drive train (gear) for driving a tool (chain saw), wherein the drive train comprises a gearbox, wherein the overload protection device (safety coupling) comprises: a drum (5) having a circumferential wall; at least one fly body (6b, 11) engaging the circumferential wall of the drum (5); wherein the drum (5) and the at least one fly body (6b, 11) are mounted in the drive train.

The reference of Bidanset discloses the claimed subject matter except the drum (5) and the at least one fly body mounted in the drive train between the motor and the gearbox; wherein

Art Unit: 3721

the drum is arranged at an input side of the drive train and the at least one fly body is arranged at an output side of the drive train. However, it would have been obvious matter of design choice to modify the reference of Bidanset by having the drum and the at least one fly body mounted in the drive train between the motor and the gearbox, since applicant has not disclosed that having the drum and the at least one fly body mounted in the drive train between the motor and the gearbox solves any stated problem or is for any purpose and it appear that the drum and the at least one fly body would perform equally well when mounted any other way.

With regard to claim 19, the overload protection device of Bidanset comprising means (11) for statically pressing the at least one fly body against the circumferential wall of the drum (5).

With regard to claim 20, the overload protection device of Bidanset is arranged in the machine tool as shown in Figure 3, to engage the drum and at least one fly body forced by gravity against the circumferential wall.

With regard to claim 23, the overload protection device of Bidanset, includes at least one fly body (6b) having a first end (6c) that is pivotably supported and has a second free end (proximal end of 6b) provided with positive-locking guide means (11).

Claim 24 is rejected under 35 U.S.C. 103(a) as being unpatentable over Bidanset (US 3,982,616) in view of Shultz (US 5,503,261).

With regard to claim 24, the overload protection device of Bidanset discloses the claimed subject matter except a hinge bearing that pivotably supports the at least one fly body.

Art Unit: 3721

The reference of Shultz teaches the hinge bearing (24, 26) that pivotably supports the at least one fly body (32) wherein second free end (89, 90), beginning at the hinge bearing (24, 26), points in an operational rotary direction of the drum (67). Therefore, it would have been obvious to one skilled in the art at the time of the invention to provide the overload protection device of Bidanset with hinge bearing for pivotably supporting the at least one fly body in order to selectively couple to and uncouple from the drum.

Allowable Subject Matter

Claims 6, 10-13, 15-16, 21-22 and 25 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is a statement of reasons for the indication of allowable subject matter: The art of record fails to disclose a portable device, wherein the pressing device is comprised of an elastomer member arranged between the output shaft and the coupling.

The art of record fails to disclose a portable device, wherein the coupling comprises first driving means and second driving means, wherein the first driving means have a rotary surface interacting by friction with a rotary surface of the drum, wherein the first driving means comprise a spring device forcing the rotary surface of the driving means against the rotary surface of the drum, wherein the second driving means have a non-radial surface normal and a symmetric or asymmetric profile interacting by positive-locking engagement a surface of the drum, wherein the surface of the drum has a non-radial surface normal, wherein the second driving means comprise a return device for returning the second driving means toward the drive

Art Unit: 3721

shaft, and wherein the first and second driving means are alternating and uniformly distributed about a circumference of the output shaft.

The art of record fails to disclose a portable device, wherein the coupling comprises driving means comprised of an elastomer member connected to the output shaft and a set of balls circumferentially distributed about the elastomer member and facing the drum.

The art of record fails to disclose a portable device, wherein the coupling comprises driving means that have a non-radial surface normal and a symmetric or asymmetric profile interacting by positive-locking engagement a surface of the drum, wherein the surface of the drum has a non-radial surface normal, wherein the driving means comprise a return device for returning the driving means toward the drive shaft.

The art of record fails to disclose an overload protection device, wherein the means for statically pressing the at least one fly body against the circumferential wall of the drum comprise a radial stop, wherein the at least one fly body has a radially outwardly positioned friction coating pressed by the radial stop against the circumferential wall of the drum.

The art of record fails to disclose an overload protection device, further comprising a support member having a bearing leg, wherein the at least one fly body has two spaced apart securing legs engaging opposed sides of the bearing leg, wherein a hinge pin is provided that penetrates the bearing leg and the securing legs.

The art of record fails to disclose an overload protection device, further comprising a support member on which the at least one fly body is supported, wherein the drive train comprises shaft stub arranged between the overload protection device and the gearbox, wherein the shaft stub is supported by a rolling bearing, wherein the rolling bearing is secured between the support

Art Unit: 3721

member and an input pinion of the gearbox.

Response to Arguments

3. Applicant's arguments with respect to claims 1-5,7-9,14,17-20,23,24 and 26 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

4. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Refer to attachment for notice of references cited and recommended for consideration based on their disclosure of limitations of the claimed invention.

Art Unit: 3721

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Nathaniel C. Chukwurah whose telephone number is (571) 272-4457. The examiner can normally be reached on M-F 6:00AM-2:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Rinaldi Rada can be reached on (571) 272-4467. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

NC

October 6, 2006.



Rinaldi I. Rada
Supervisory Patent Examiner
Group 3700